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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,906

10/10/2006

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EXAMINER

MAI, NGOCLAN THI

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

11/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/585,906	Applicant(s) SHIBUYA ET AL.	
	Examiner NGOCLAN T. MAI	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 8-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/12/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Applicant's election with traverse of group I, claims 1-6 and species a, claim 7 in the reply filed on 6/27/08 is acknowledged. The traversal is on the ground(s) that there is no specific showing that the claim is obvious or anticipated by Mahot et al. This is not found persuasive. However upon further consideration the invention listed as Groups I and II do not relate to a single general inventive concept under PCT rule 13.1 because under PCT Rule 13.2, they lack the same corresponding special technical features because claim 1 is obvious by Suzuki, et al. (U.S. Patent No. 6,583,535). See paragraph 3, below. Accordingly, the technical feature linking the inventions such as sintering tungsten-base material does not provide a contribution over the prior art, and no single general inventive concept exists. Therefore, restriction is still appropriate.

2. Claims 8-18 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 6/27/08.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki, et al “Suzuki” (U.S. Patent No. 6,582,535) or JP03-055758 (see attached machine translation)

Suzuki discloses a tungsten target formed of a tungsten base-sintered body having a relative density of 99% or more, fine crystal grain having average grain size of 100 μm or less and an oxygen content of 20 ppm or less. See col. 2, lines 35-39. Suzuki particularly discloses sintered bodies having relative density of 99.5% or more and an average grain size of 58-65 μm . See Table 1.

JP 03-055758 discloses a tungsten sputtering target having a relative density of 99% or more, fine crystal grain having average grain size of 100 μm or less and an oxygen content of 20 ppm or less. See abstract. JP03-055758 discloses the total amount of alkaline metals such as Na, K is less than 1 ppm and radioactive element is 10 ppb or less. See claim 2. JP 03-055758 particularly discloses sintered bodies having relative density of 99.5% or more and an average grain size of 40-80 μm . See Table 2.

Suzuki and JP 03-055758 neither disclose the crystal structure of the sintered body nor teach the average grain size of 30 μm or less.

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Concerning the claimed average grain size, while the references particularly teaches from 58-65 μm (Suzuki Table 1) 40-80 μm (JP 03-055758 Table 2), the references broadly teaches average grain size of 100 μm or less, nevertheless, which includes grain size less than 30 μm . The examiner finds that the different in grain size which overlaps and fall within applicant's claimed range establish a prima facie case of obviousness. Furthermore, the difference in grain size will not support the patentability of the subject matter encompassed by the prior art unless there is evidence indicating such grain size is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable range by routine experimentation." See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969); *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d (Fed.cir), cert. denied, 493 U.S. 975 (1989); *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). Additionally, the specification contains no disclosure of either the critical nature of the claimed grain size range or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in the claim, the applicant must show that the chosen dimensions are critical. *In re Woodruff*, 919 F.2d, 1575, 16 USPQ2d, 1934 (Fed. Cir. 1990).

Regarding the claimed isotropic structure as well as the properties recited in claims 2-6, the claimed properties would have been inherently possessed by the tungsten-base sintered body of Suzuki and JP03-055758 since the sintered body is produced by identical or substantially identical processes, i.e., the reference's hot pressing and HIP (Suzuki, abstract and JP03-055758, claim 6) versus pressing and sintering and HIP in the instant application, a prima facie

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case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possesses characteristics attributed to the claimed product. In re Spade, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990), In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977) and also see MPEP § 2112.01.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al or JP 03-055758 in view of Penneck (U.S. Patent No. 5,209,987).

Suzuki and JP 03-055758 differ from the claim in that Suzuki and JP 03-055758 do not teach using the tungsten base sintered body as a discharge lamp electrode. Penneck teaches in sputtering process, sputtering target serves as the cathode electrode to the glow discharge system. See col. 11, lines 28-31. There it would have been obvious to one skilled in the art to form and use the sputtering target of Suzuki or JP 03-055758 as a discharge lamp electrode as taught by Penneck.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGOCLAN T. MAI whose telephone number is (571)272-1246. The examiner can normally be reached on 8:30-5:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit
1793

n.m.